

(Translation)

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Title: Method of Producing Granular Substance and Apparatus therefor

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As shown in Fig. 1, the apparatus according to the present invention includes: a hollow molding drum (1) disposed on a horizontal position; a hopper (2) for supplying a granular material that is disposed near a lower part of an inner peripheral surface of the molding drum (1); molding holes (3) formed in the inner peripheral surface of the molding drum (1); a pressing roller (4) moving relative to the molding drum such that the pressing roller rotates along the inner peripheral surface of the molding drum (1) to compress the granular material in the molding holes (3) at a predetermined compression ratio to mold the granular material; a cleaning unit (5), such as a brush, for sweeping and cleaning the inner peripheral surface of the molding drum (1) and an inside of each molding hole (3); a heating unit (6) for heating the molding drum (1) that is disposed upstream of the hopper (2); and a cover (7) disposed outside the molding drum (1) that comes tightly in contact with an outer peripheral surface of the molding drum (1) when the granular material is charged into the molding holes (3), and, upon completion of aging, separates from outer peripheral surface of the molding drum (1) to serve as a container for the granular material when the granular material is discharged.

Inside the hopper (2) disposed in the molding drum (1), there are arranged a vibrator that is capable of softly charging a constant amount of granular material into the molding holes (3), and a filling unit (14) such as a rotating blade. Outside the hopper (2), there is arranged a scraper (15) for scraping an excessive, overfilled granular material, that is made of a metal such as stainless or iron, or suitable plastics. A sliding and pressing force of the scraper (15) can be adjusted.

By the rotation of the molding drum (1), the granular material is sequentially, softly charged into each molding hole (3) coming directly below the hopper (2), without being kneaded by the filling unit (14) arranged in the hopper (2). While the molding drum (1) is rotated, the excessive, overfilled granular material is cleared by the scraper (15) arranged outside the hopper (2). In this manner, each of the molding holes (3) is filled with a uniform amount of granular material.